HEALTH ANALYSIS

Using the Power of Clinical Data Analysis to Improve Navy Health Care

The Health Analysis Department (HA) comprises a diverse team of medical, management and analytic experts who provide clinical performance measurement to improve patient outcomes, transform clinical processes and reduce costs. HA brings sophisticated analytical capabilities, including scientific methodology, biostatistics and epidemiology, to a broad range of clinical databases to derive innovative ways to improve care and effectiveness in the clinical setting. For more information on the Health Analysis Department, visit: http://www.med.navy.mil/sites/nmcphc/health-analysis/.

HA Data Source Access and Analysis

HA has direct access to the most comprehensive clinical data sources in the Military Health System (MHS), including M2, MDR, and the ACTUR cancer registry. These databases support analysis of patient care data to drive clinical studies and process improvement projects, such as disease screenings, disease management, injuries, causes of readmissions, and patient outcomes. HA's experts perform advanced data analysis to identify trends and conduct studies on behalf of the Navy and their customers. HA's consultative approach delivers customized products and reports to our customers drawn from comprehensive clinical health data.

	Data Source Capability	Practical Application
M2	MHS Management Analysis and Reporting Tool (M2) is a powerful ad-hoc query tool used to manage and oversee operations from all MHS regions worldwide.	• A Food and Drug Administration warning prompted HA to use data from the M2 database to analyze prescription rates across beneficiaries of all services to determine the prevalence of the potentially harmful clinical practice of prescribing codeine to pediatric patients following tonsillectomy or adenoidectomy • Data analysis indicated patients were continuing to receive codeine post operatively. • Between December 2012 and January 2013, HA quickly responded to these findings with a phased, targeted clinical analysis and outreach strategy to tri-service pediatric specialty leaders communicating the risk of using codeine for children post adenoidectomy/tonsillectomy. • The Department's collaboration with the FDA, combined with HA's proactive communication strategy reached the widest possible audience, and subsequent analysis demonstrated a 99 percent decrease in the use of codeine in children post adenoidectomy/tonsillectomy as a result.
MDR	MHS Data Repository (MDR) is the centralized data repository for the DOD that captures, validates and distributes health network data worldwide.	• To determine the prevalence of unnecessary antibiotic prescriptions and estimate the associated costs, HA used the MDR to study data tables from the Comprehensive Ambulatory/Professional Encounter Record and the Pharmacy Data Transaction Service. • HA calculated the resulting pharmacy costs of these transactions including ingredient cost, dispensing fees, and taxes. Results showed that 25 percent of the time, an antibiotic was prescribed unnecessarily for a viral respiratory illness, resulting in a potentially avertable loss of $5,173,900 from CY 2011-2012. • HA recommended a targeted outreach effort to the Southern region and Army beneficiaries, as these demographics have the highest number and rate of unnecessary prescriptions yielding the highest associated expense.
ACTUR	The Automated Central Tumor Registry (ACTUR) is a hospital based application and data repository that is part of the DOD's Cancer Surveillance Program.	• Prostate cancer is the most frequently diagnosed cancer in men with a prediction of 241,740 new cases expected in 2012 in the U.S. Incidence rates are higher among African-American men than Whites for reasons that remain unclear. Age, race, and a family history of the disease are the only well-established risk factors for prostate cancer. • Using ACTUR, the Health Analysis department created a Prostate Cancer Analysis to demonstrate age-adjusted prostate cancer incidence rates, and assess trends among race and location utilizing DoD data. • The data showed that DoD rates trend lower for prostate cancer than United States rates for all three subgroups of race over time. Further study is needed to determine if these trends are consistent over the long term.

How the Databases Can Work For You

HA performs advanced health data analyses to improve mission readiness and reduce operating costs by ensuring compliance with clinical practice guidelines, minimizing variation, and enhancing quality and timeliness of care. Our data sources can be used alone or integrated with other data sources to create a customized study relevant to your goals and key audiences.